

REMARKS

Applicant appreciates the Examiner's thorough review of the application. Reconsideration and allowance of all claims are requested.

Currently examined claims include claims 15 - 17, 20 and 23 - 36. Formerly withdrawn claims 1 - 14, 18 - 19 and 21 - 22 have been canceled without prejudice. Applicants reserve the right to pursue the cancelled claims in divisional patent applications.

Claim Amendments

Applicant has amended the claims to more clearly indicate the subject matter claimed. No new matter has been added by the amendments. In particular, the claims independent claims have been amended to more clearly describe the multi-dimensional content profiling.

Support for the amendments to the claims and definitions of terms may be found generally at pages 51 - 61 of the specification. No new matter has been added by the amendments. More specifically, support for the amendments to the independent claims may be found at, for example, P. 49, ll. 7 - 11; P. 52, ll. 4 - 6; P. 53, ll. 12 - 13; P. 54, ll. 15 - 16; and P. 53, ll. 13 - 15.

Applicant has added new claims 24 - 36, which depend from independent claims 15, 20 and 23. No new matter has been added by the amendments. Support for the new claims may be found generally at pages 51 - 61 of the specification. More specifically, support may be found at: P. 41, ll. 7 - 11 for claim 24; P. 54, l. 17 - P. 55, l. 17 for claim 25; P. 54, l. 17 - P. 55, l. 17 for claim 26; P. 57, l. 9 - P. 58, l. 6 for claim 27; P. 53, ll. 19 - 21 for claim 28; P. 53, ll. 19 - 21 for claim 29; P. 53, ll. 16 - 18 for claim 30; P. 54, l. 17 - P. 55, l. 17 for claim 31; P. 54, l. 17 - P. 55, l. 17 for claim 32; P. 41, ll. 7

- 11 for claim 33; P. 59, ll. 11 - 12 for claim 34; P. 60, l. 9 - P. 61, l. 7 for claim 35; and P. 56, ll. 1 - 4 for claim 36.

No new matter has been added by the amendments. Reconsideration and allowance of all claims are requested.

Claims 15 - 17, 20 and 23 - 36 are patentable under 35 U.S.C. 102(e) over Doyle et al. (U.S. Patent Publication No. 2005/003934).

Claims 15 - 17, 20 and 23 - 36 are patentable over Doyle under 35 U.S.C. 102(e).
Reconsideration and allowance are requested.

Independent claim 15 requires a method comprising: receiving network data; processing the network data at a decoder chain to create input data for applying at least multi-dimensional content profiling; preventing, through the network data, leaks of information by at least applying the multi-dimensional content profiling; and wherein the multi-dimensional content profiling comprises: loading one or more profiles, wherein the one or more profiles each comprise an expected set of statistical characteristics of data; continuously receiving the input data from the decoder chain; determining a probabilistic measure of membership of the input data relative to the one or more profiles; comparing the probabilistic measure with a threshold requirement for each of the one or more profiles; and generating a reactive measure if the probabilistic measure meets the threshold requirement.

Independent claim 20 requires a machine-readable medium having encoded information, which when read and executed by a machine causes a method comprising: receiving network data;

processing the network data at a decoder chain to create input data for applying at least multi-dimensional content profiling; preventing, through the network data, leaks of information by at least applying multi-dimensional content profiling; and wherein the multi-dimensional content profiling comprises: loading one or more profiles, wherein the one or more profiles each comprise an expected set of statistical characteristics of data; continuously receiving the input data from the decoder chain; determining a probabilistic measure of membership of the input data relative to the one or more profiles; comparing the probabilistic measure with a threshold requirement for each of the one or more profiles; and generating a reactive measure if the probabilistic measure meets the threshold requirement.

Independent claim 23 requires an apparatus comprising: a receiver to receive network data; a processor, coupled to the receiver, to prevent, through the network data, leaks of information by at least applying multi-dimensional content profiling, wherein the processor processes the network data at a decoder chain to create input data for applying at least the multi-dimensional content profiling; the multi-dimensional content profiling comprising: loading one or more profiles, wherein the one or more profiles each comprise an expected set of statistical characteristics of data; continuously receiving the input data from the decoder chain; determining a probabilistic measure of membership of the input data relative to the one or more profiles; comparing the probabilistic measure with a threshold requirement for each of the one or more profiles; and generating a reactive measure if the probabilistic measure meets the threshold requirement.

Doyle cannot anticipate the claims because Doyle does not contain all of the limitations of independent claims 15, 20 and 23.

Doyle discloses a method of securing or controlling document components of compound documents with security rules specific to particular document components. See Abstract. Doyle

secures document components with "security containers" that encapsulate the components and component metadata. See Abstract. Doyle further discloses that document controls can be exercised at the level of individual portions of a larger document. See paragraph 0037. Generally, Doyle discloses a digital rights management ("DRM") application. A document component applying the DRM of Doyle cannot be read without recipient having private key access. See, for example, FIG. 8. There is no suggestion that the private access keys comprise a set of statistical characteristics of data. Moreover, there is no determination that the probabilistic measure of membership of the input data in the set of statistical characteristics of data is found in Doyle. Furthermore, Doyle's invention does not require that the document is transferred over the network, but merely that a user attempt to access the encrypted content.

In contrast, Applicant's invention is a device for listening to network data to prevent unwanted leaks of information. As recited in the independent claims, Applicant's invention requires, along with additional elements, receiving network data and applying multi-dimensional content profiling. Features such as the multi-dimensional content profiling as disclosed in Applicant's invention are neither disclosed nor suggested by Doyle. Applicant's invention performs these actions regardless of whether the network data is encrypted, has embedded DRM tags, or has the partial DRM "security containers" as found in Doyle. Furthermore, Applicant's invention does not require any special preparation of the network data being transferred over the network to be operational.

Applicant's invention is able to prevent leaks of information, including such information as would be in documents incorporating the encryption of the Doyle invention, by applying multi-dimensional content profiling on received network data. As clearly set forth in the disclosure multi-dimensional content profiling is a combination of techniques targeted at identification of documents belonging to a certain document class. Specification at page 51, line 5 - page 61, line 10. The claims

have been amended to more clearly specify the operation of multi-dimensional content profiling. Generally, multi-dimensional content profiling is a collection of statistical routines that profile data by implementing a set of increasingly precise statistical estimators and implementing run-time verification of extracted entities. Specification at page 51, line 5 - page 61, line 10. Multi-dimensional content profiling or similar procedures are not found in Doyle.

Doyle does not teach the invention as claimed in the independent claims. For example, the Office Action cites to paragraphs 0014, 0021, 0038, 0040 - 0041, 0044 - 0047, 0050 - 0051, 0057 - 0060 and 0081 - 0087 as teaching "preventing, through the network data, leaks of information by at least applying multi-dimensional content profiling". See page 3 of the April 27, 2007 Office Action. These paragraphs, however, do not appear to teach applying the multi-dimensional content profiling required by the claims. For example, paragraph 0014 discloses control, by document creators, of access to individual components of a document, but does not disclose applying multi-dimensional content profiling. Paragraph 0021 discloses control of access to document components by conditional logic, but does not disclose applying multi-dimensional content profiling. Paragraph 0038 discloses a "security container" encapsulating portions of a document for controlling access to that component, but does not disclose applying multi-dimensional content profiling. Paragraphs 0040 - 0041 disclose metadata associated with document components for controlling access to the components and for containing functional controls for the components, but do not disclose applying multi-dimensional content profiling. Paragraph 0044 discloses preventing accidental dissemination of information by preventing receiving parties from accessing the components unless authorized, but does not disclose applying multi-dimensional content profiling. Paragraphs 0045 - 0047 disclose encryption headers, encrypted symmetric keys or public key infrastructure public/private key pairs for determining whether a receiving party is authorized to view document components, but do not disclose applying multi-dimensional content profiling. Paragraphs 0050 -

0051 disclose encrypted document components with controls on access, but do not disclose applying multi-dimensional content profiling. Paragraphs 0057 - 0060 disclose object-oriented security container operations, including "filter rules" for determining whether a document component may be accessed by a user. In particular, the filter rules in paragraphs 0059 - 0060 disclose a series of rules for checking authorization to act upon a security container object or document component object, but do not disclose applying multi-dimensional content profiling as required in the claims. Paragraphs 0081 - 0087 disclose receiving access requests and verifying a user's privilege rights regarding access through a series of requests mediated by the encryption header, but do not disclose applying multi-dimensional content profiling. Doyle simply makes the reading of the content more difficult, but in no way stops the transfer of the encrypted data.

Therefore, Doyle at least does not disclose preventing, through the network data, leaks of information by at least applying multi-dimensional content profiling as required in the independent claims. Doyle does not disclose each and every element of the independent claims so a rejection under 35 U.S.C. 102 is unsupportable. Consequently, independent claims 15, 20 and 23 are patentable over Doyle.

Dependent claims 16 - 17 and 24 - 36 add further patentable features to the patentable features of the independent claims. Therefore, the dependent claims are patentable over Doyle.

Because Doyle does not disclose each and every limitation found in claims 15 - 17, 20 and 23 - 36 Doyle does not anticipate these claims. Accordingly, claims 15 - 17, 20 and 23 - 36 are patentable over Doyle. Applicants respectfully request that the Examiner withdraw the rejection.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Applicant believes no fee is due with this Substitute Amendment. However, if a fee is due, please charge our Deposit Account No. 50-2228, under Order No. 020501.0802PTUS from which the undersigned is authorized to draw.

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Respectfully submitted,

By


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